UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
http://www.epa.gov/region08

AUG 2 2 2012

Ref: 8EPR-N

Dan Wenk, Superintendent
Yellowstone National Park
c/o Winter Use SEIS
P.O. Box 168, Yellowstone National Park
Wyoming 82190

Re: EPA Comments for the
Yellowstone National Park Draft Winter
Use Plan/Supplemental Environmental Impact
Statement; CEQ # 20120214

Dear Superintendent Wenk:

The U.S. Environmental Protection Agency Region 8 (EPA) has reviewed the U.S. Department of Interior, National Park Service's (NPS) Summer 2012 Draft Winter Use Plan (Plan) Supplemental Environmental Impact Statement (SEIS) for Yellowstone National Park (Park). Our review was conducted in accordance with the EPA's responsibilities under section 102 of the National Environmental Policy Act (NEPA), 42 U.S.C. § 4332(2)(c), and Section 309 of the Clean Air Act, 42 U.S.C. § 7609. Section 309 of the Clean Air Act directs the EPA to review and comment in writing on the environmental impacts of any major federal agency action. The EPA's comments include a rating of the environmental impact of the proposed action and the adequacy of the NEPA document.

Summary of SEIS and Alternatives Analyzed

The SEIS evaluated four alternatives including the No Action alternative (Alternative 1). Under all action alternatives, new best available technology (BAT) requirements would be developed and implemented for snowcoaches, and existing BAT requirements for snowmobiles for carbon monoxide (CO) emissions and noise would be strengthened. Alternative 2 is a continuation of snowmobile/snowcoach use at the 2011/2012 interim daily regulation limits of 318 and 78, respectively. Alternative 3 entails a transition to snowcoaches only. Snowmobiles would be completely phased out by the 2020/2021 winter season, and the east Park entrance (Sylvan Pass) would be seasonally closed. The Preferred Alternative, Alternative 4, proposes a new approach to managing oversnow vehicle (OSV) use by setting a maximum number of daily transportation events to access the park. The NPS defines a single transportation event as either a group of seven snowmobiles (on average) or one snowcoach. The transportation event approach is based on the concept that both types of transportation events present a comparable visitor experience and environmental impact. The Preferred Alternative would permit no more than 110 transportation events daily, of which up to 50 of those events could be allocated to groups of snowmobiles. New BAT standards for both snowcoaches and snowmobiles would be implemented in the 2017/2018 winter season, and four non-commercially guided snowmobile groups would be permitted daily. By managing Winter Use through transportation events in the Preferred Alternative, the

Park also establishes a framework that provides important incentives for OSVs to meet additional environmental performance standards.

Identified Concerns and Suggested Enhancements

Our review of the SEIS found that it evaluated a diverse range of alternatives and generally used sound and reasonable methods to assess resource impacts. The SEIS reflects the substantial amount of thought that NPS has put toward improving environmental performance of the OSV fleet and identifying opportunities and incentives to reduce associated impacts to the Park. The EPA has comments, concerns and suggested enhancements in the following areas: 1) air quality modeling analyses and representative emissions; 2) environmental protection thresholds; and 3) adaptive management and monitoring.

The enclosed Detailed Comments provide specific recommendations for addressing these concerns. As part of the detailed comments, we also identify technical recommendations to improve the accuracy of air quality modeling and its associated conclusions regarding current snowmobile fleet emissions and for BAT snowcoaches.

The EPA's key recommendations include providing:

1. Either revised modeling for the current snowmobile fleet or additional discussion regarding original model results and conclusions. We also suggest using alternative emissions data to represent snowcoach BAT for 2017/2018.

2. Additional rationale to support the environmental protection thresholds used as a basis for the transportation event limits. This information will help assure and sustain resource protections in the Preferred Alternative.

3. An explanation of what the NPS's resource protection goals or minimum desired environmental conditions in the Winter Use areas of the Park will be (e.g., for air emissions, soundscape protection, wildlife disturbance, and visitor access/experience), as well as how the NPS intends to ensure these goals will be met via adaptive management triggers.

The EPA recognizes the amount of effort that the NPS has invested in preparing the SEIS, and appreciates the opportunities we've had to discuss previous concerns during the NEPA process as a Cooperating Agency. Based on questions associated with modeling assumptions and the analysis of impacts, and because the Preferred Alternative does not include details of an adaptive management plan including thresholds to assure that it provides and sustains the predicted level of environmental impact, it is our view that additional information and improved description is needed to adequately evaluate resource impacts of the proposed action and its alternatives. As a result, we rate the SEIS an "EC-2" (environmental concerns, insufficient information). This rating is further described in EPA's enclosed ratings criteria.

We appreciate the opportunity to participate in the review of this project. If we may provide further explanation of our comments during this stage of your planning process, please contact Phil Strobel, Deputy Director of our NEPA Compliance and Review Program at 303-312-6704, or your staff may contact Melanie Wasco, Lead NEPA Reviewer, at 303-312-6540.

Sincerely,

Suzanne J. Bohan
Director, NEPA Compliance and Review Program
Office of Ecosystems Protection and Remediation

Enclosures:

Detailed Comments
Ratings Criteria

Detailed Comments by the US EPA
Yellowstone National Park Draft Winter Use Plan/
2012 Supplemental Environmental Impact Statement

Air Quality Modeling and Representative Emissions

Snowmobiles

The SEIS Chapter 4 discusses the March 2012 in-field emissions testing of two snowmobiles. The document notes an unexplained emissions factor increase for carbon monoxide (CO) and hydrocarbons (HC), from 2 to 17 times higher depending on the travel mode relative to the previous 2006 test of an Arctic Cat snowmobile (see page 229 of the SEIS and Table 6 of the emissions testing document). Possible explanations discussed include increases in engine size and horsepower compared to the 2006 model, tuning problems with the specific 2011 Arctic Cat TZ1 that was measured, less focus from the manufacturer on idle mode emissions, and a modeling assumption that OSV's would be idling at the west entrance.

This discussion raises two concerns regarding the representativeness of the current snowmobile fleet emission factors: 1) whether the recently tested Arctic Cat snowmobile CO emissions represent a typical Arctic Cat TZ1 snowmobile, and 2) whether the two snowmobiles tested and used in modeling accurately represent the current BAT fleet. It is our understanding that the TZ1 makes up about two thirds of the current fleet, increasing the importance of assuring the model is using accurate emission factors.

More specifically, if the field-measured emissions of the 2011 TZ1 are found to be unrepresentatively high when compared to TZ1 actual emissions, the SEIS modeling would overestimate the emissions of the current fleet. In turn a field error measurement could also render inaccurate the figures for the current fleet snowmobile emissions as presented in Table 46 for criteria pollutants, and in Table 47 for hazardous air pollutant (HAP) emissions.

In short, it appears that the potential overall effect of elevated emission factors for the current fleet is that the SEIS may not accurately compare the impacts of the alternatives to existing conditions.

Recommendations:

- Include in the Final SEIS additional discussion regarding model inputs for the current snowmobile fleet. We specifically recommend NPS investigate with the manufacturer whether the emission factors used for the 2011 Arctic Cat TZ1 are representative and why. If they are determined not to be representative, the EPA recommends that remodeling of alternatives be conducted using revised, accurate emission factors. Another option that would not require modeling would be to include in the SEIS an explanation of the likely effect that the inaccurate emissions estimates have on the original model results and conclusions. The EPA is willing to continue assisting in this area.

- Include information in the Final SEIS regarding the number of vehicles by model type that constitutes the current snowmobile rental fleet.

Snowcoaches

The EPA notes that the March 2012 emissions testing included the following non-historic snowcoaches: 2008 Chevy Express (gasoline), 2011 Ford E350 (gasoline), 2011 Ford F450 (diesel), and 2011 Ford F550 (diesel). This information is contained in the March 2012 emissions testing report at: http://www.nps.gov/yell/parkmgmt/upload/pem_of_snowcoaches-snowmobiles_3-2012.pdf Emissions from the 2008 Chevy Express significantly increase the BAT emissions for the modeled 2017-2018 winter season as compared to the 2011 vehicles, especially for carbon monoxide.

Recommendations:

- Do not include the 2008 Chevy Express March 2012 test data in the representation of BAT. Instead, only consider emissions from the three 2011 model snowcoaches to represent snowcoach BAT for 2017-2018. Our recommendation is based on the following:
    - This 2008 snowcoach is underpowered, not allowing the snowcoach to operate above second gear, and therefore is not representative of desired BAT emission performance;
    - This 2008 snowcoach will be exiting the allowed snowcoach fleet as of 2018 (ten-year NPS BAT requirement); and
    - The three 2011 snowcoaches with March 2012 in-use measured emissions best represent the potential 2017-2018 snowcoach non-historic fleet for the air quality modeling work.
- The EPA notes that the emissions used in the Air Quality Report and Draft SEIS for modeled 2017-2018 snowcoach BAT would have produced significantly less emissions especially for carbon monoxide if NPS had excluded the 2008 Chevy Express from the emissions averaging for snowcoach BAT. We also note that the emissions data for the 2011 Ford E350 mentioned in the March 2012 testing report are considerably lower than the 2008 Chevy Express, although they are in the same vehicle class. For example, for the "low speed" test, the Chevy Express was 42 grams per mile (g/mile) for CO while the Ford E350 was 12.5 g/mile. For the "cruise speed" test, the Chevy Express was 396 g/mile for CO and the Ford E350 was only 16.1 g/mile. The BAT fleet actually produces more emissions than does the current fleet (see March 2012 emissions report, Table 7, Class II vs. Class IIB) because the modeled BAT Class II snowcoach fleet includes the Chevy Express.

In view of the above, we recommend seeking a way to define Class II BAT to assure that the BAT fleet produces an improvement over the current Class II fleet. The EPA is available to continue to assist with this matter.

EPA Emissions Standards

Table 4-1 (page 11 of the air quality modeling report) includes EPA emission standards for snowmobiles. However the actual emissions standards are not presented. Instead, the table presents equations which allow higher hydrocarbons (HC) in return for lower CO or vice versa.

Recommendation:

- For clarification, the EPA suggests a footnote be added to the 2012 standards line as follows:

"For 2012 and later model year snowmobiles, the snowmobile HC and CO emissions standards are combined in the form of a manufacturer fleet average equation which allows for a trade-off between HC and CO emissions to account for the use of different control technologies. For the sake of simplicity, the HC and CO values in this table represent nominal values that might be expected under that equation, rather than actual emission standards."

Environmental Protection Thresholds

In reviewing the Preferred Alternative, the EPA was unable to determine how the NPS established thresholds for the maximum number of transportation events per day for the Preferred Alternative that would ensure acceptable environmental impacts. Additionally, we could not ascertain the basis for establishing the maximum number of 10 snowmobiles per event. The EPA believes that explaining how the NPS arrived at these thresholds will assist with full disclosure and help support the resource protections provided by the Preferred Alternative.

Recommendation:

- We recommend providing rationale in the Final SEIS to identify and document how the NPS established the natural resource protection thresholds used as a basis for the transportation event limits. As part of this rationale we recommend that the Final SEIS discuss what the air quality and soundscape protection goals are and how the NPS intends to monitor and sustain those protection levels in the adaptive management plan.

Adaptive Management and Monitoring

Adaptive management associated with this analysis will be important to ensure that the intended level of resource protection is achieved and sustained. This is particularly true in this case because winter use management planning relies so heavily on the results of predictive modeling. The NPS outlines an initial adaptive management and monitoring framework in the Draft SEIS that is meant to begin the process of reducing uncertainties regarding resource impacts. The Park proposes to convene a working group during the fall of 2012 or winter of 2012/2013 to develop an adaptive management and monitoring plan projected to be published in the fall of 2013. The schedule precludes stakeholders from reviewing and commenting on the plan during the NEPA process.

Recommendations:

- Articulate in the Final SEIS adaptive management and monitoring framework what the NPS's resource protection goals or minimum desired environmental conditions in the Winter Use areas of the Park will be (e.g., for air emissions, soundscape protection, wildlife disturbance, and visitor access/experience). We suggest that the Final SEIS conveys that these goals/conditions would be used to guide the stakeholder process in setting trigger points that would determine when additional management decisions are necessary and whether additional NEPA review might be needed. Also, to support the statement that the Preferred Alternative will result in a "cleaner and quieter park," we suggest the NPS establish an adaptive management strategy goal of striving to sustain or improve current winter season environmental conditions.

- Given that snowmobiles currently being manufactured do not meet the revised BAT definition in the Draft SEIS, we recommend including additional discussion in the Final SEIS that describes actions that the Park will take if the snowmobile fleet cannot meet the new BAT definition. We

recommend this issue be addressed in the description of the Preferred Alternative in Chapter 2 and reflected in the adaptive management plan.

U.S. Environmental Protection Agency Rating System for Draft Environmental Impact Statements

Definitions and Follow-Up Action*

Environmental Impact of the Action

LO - - Lack of Objections: The Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC - - Environmental Concerns: The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO - - Environmental Objections: The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU - - Environmentally Unsatisfactory: The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1 - - Adequate: EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2 - - Insufficient Information: The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new, reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

Category 3 - - Inadequate: EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.